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02 MAR 95 16:03:35 U.S. Patent & Trademark Office P0017  
L3 53 S L1(P)L2  
L4 2 S L3/AB

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(FILE 'USPAT' ENTERED AT 15:29:40 ON 02 MAR 95)

SET PAGELENGTH 62  
SET LINELENGTH 78  
L1 961 S SYSTEM CALL OR SYSTEM PROCESS  
L2 4305 S KERNEL  
L3 53 S L1(P)L2  
L4 2 S L3/AB

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=> d 13 2 5 6 7 10 14 18 27 29 41

2. 5,390,329, Feb. 14, 1995, Responding to service requests using minimal system-side context in a multiprocessor environment; Gregory G. Gaertner, et al., 395/650; 364/230, 230.1, 230.2, 230.3, 230.4, DIG.1 [IMAGE AVAILABLE]

5. 5,379,432, Jan. 3, 1995, Object-oriented interface for a procedural operating system; Debra L. Orton, et al., 395/700; 364/280, 286, 976, 977.2, DIG.1, DIG.2; 395/500 [IMAGE AVAILABLE]

6. 5,367,680, Nov. 22, 1994, Rendering context manager for display adapters supporting multiple domains; Gregory A. Flurry, et al., 395/650; 364/237.2, 281.3, 281.4, 281.7, 286, DIG.1; 395/162 [IMAGE AVAILABLE]

7. 5,361,359, Nov. 1, 1994, System and method for controlling the use of a computer; Homayoon Tajalli, et al., 395/700; 340/825.31; 364/918.7, DIG.2 [IMAGE AVAILABLE]

10. 5,327,553, Jul. 5, 1994, Fault-tolerant computer system with /CONFIG filesystem; Douglas E. Jewett, et al., 395/575; 371/11.1, 11.3 [IMAGE AVAILABLE]

14. 5,291,608, Mar. 1, 1994, Display adapter event handler with rendering context manager; Gregory A. Flurry, 395/725; 364/230.2, 231.5, 237.2, 238.1, 238.2, 241.4, 242.2, DIG.1 [IMAGE AVAILABLE]

18. 5,202,971, Apr. 13, 1993, System for file and record locking between nodes in a distributed data processing environment maintaining one copy of each file lock; Larry W. Henson, et al., 395/425; 364/246.6, 246.8, 260.1, 280, 282.1, 939, 940, 940.1, 940.61, 940.62, 940.92, 963, 963.3, 964, 964.2, 969, 969.2, 974, 974.1, 974.3, 974.7, 975.2, 976, DIG.1, DIG.2; 395/600 [IMAGE AVAILABLE]

27. 5,115,505, May 19, 1992, Controlled dynamic load balancing for a multiprocessor system; Thomas P. Bishop, et al., 395/650; 364/229, 229.2, 230, 230.3, 280, 281, 281.3, 281.6, 281.7 [IMAGE AVAILABLE]

29. 5,109,515, Apr. 28, 1992, User and application program transparent resource sharing multiple computer interface architecture with kernel process level transfer of user requested services; George E. Laggis, et al., 395/725; 364/232.3, 235, 239, 241.9, 242.6, 242.7, 242.94, 247, 248.1, 253, 253.2, 254, 254.5, 265, 280, 280.2, 280.6, 280.9, 281.3, 284, DIG.1 [IMAGE AVAILABLE]

41. 4,901,231, Feb. 13, 1990, Extended process for a multiprocessor system; Thomas P. Bishop, et al., 395/325; 364/228.2, 230.3, 232.1, 245, 245.31, 247, 247.7, 256.3, 256.4, 280, 280.6, 280.9, 281, 281.3, 281.6, 281.8, 282, 284, 16:04:06 COPY AND CLEAR PAGE, PLEASE

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02 MAR 95 15:54:56 U.S. Patent & Trademark Office P0003  
23 SYSTEM PROCESS/AB  
((SYSTEM(W)PROCESS)/AB)  
262 KERNEL/AB  
L4 2 ((SYSTEM CALL/AB OR SYSTEM PROCESS/AB) (P) (KERNEL/AB))  
=> d 1-2

1. 4,761,737, Aug. 2, 1988, Method to automatically increase the segment size of unix files in a page segmented virtual memory data processing system; Keith E. Duvall, et al., 395/400; 364/256.3, 280.9, 283.1, DIG.1; 395/725 [IMAGE AVAILABLE]

2. 4,742,447, May 3, 1988, Method to control I/O accesses in a multi-tasking virtual memory virtual machine type data processing system; Keith E. Duvall, et al., 395/375; 364/DIG.1; 395/400, 425 [IMAGE AVAILABLE]

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US PAT NO: 4,761,737 [IMAGE AVAILABLE] L4: 1 of 2

ABSTRACT:

A memory management system method increases the size of a segment in blocks of 64K virtual pages in response to the system detecting that the requested page has been protected. The conventional UNIX type System Calls create and open files in virtual memory. All pages are protected "read only" until a SHMAT type **System Call** is made to operate on a page at a specific address. At that point in the process, a protection exception is recognized by the system and the UNIX **kernel** takes control to remove the protection and update the appropriate data structures to reflect the new status of the page and the addresses in real memory where the page may be found. Segments containing mapped files are also extended by the method.

US PAT NO: 4,742,447 [IMAGE AVAILABLE] L4: 2 of 2

ABSTRACT:

A method for accessing information in a page segmented virtual memory data processing system in which virtual machines running UNIX type operating systems are concurrently established, and in which a memory manager controls the transfer of information between primary and secondary storage devices in response to the occurrence of page faults.

The method establishes a plurality of data structures in a dynamic manner in response to a Supervisor call to "map" a file. The mapping process assigns a new segment of virtual memory to the mapped file and correlates, in one data structure, the virtual address of each page of data in the new segment to a disk file address where that page is actually stored.

A UNIX **system call** by an application program for a specific virtual page is handled by the page fault hanger, and not the UNIX **kernel**, since the application can supply the real address of the page on the disk file from the data structure that was created by the mapped page range Supervisor call. Simple load and store type of instructions are employed for the data transfer, which avoids much of the overhead that normally accompanies conventional UNIX read and write system calls to the storage subsystem.

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P0008

46. 4,819,159, Apr. 4, 1989, Distributed multiprocess transaction processing system and method; Dale L. Shipley, et al., 395/575; 364/230.6, 236.3, 238.4, 238.5, 239, 239.7, 242.4, 242.6, 242.92, 242.94, 242.95, 244, 244.8, 248.1, 265, 266.3, 267, 267.2, 267.4, 268, 268.3, 268.4, 268.5, 268.7, 268.9, 269.2, 269.3, 280, 281.3, 281.8, 282.1, 282.4, DIG.1; 371/9.1 [IMAGE AVAILABLE]

47. 4,769,771, Sep. 6, 1988, Multiprocessor system comprising a plurality of data processors which are interconnected by a communication network; Wouter J. H. M. Lippmann, et al., 395/200; 364/DIG.1; 395/650 [IMAGE AVAILABLE]

48. 4,761,737, Aug. 2, 1988, Method to automatically increase the segment size of unix files in a page segmented virtual memory data processing system; Keith E. Duvall, et al., 395/400; 364/256.3, 280.9, 283.1, DIG.1; 395/725 [IMAGE AVAILABLE]

49. 4,742,450, May 3, 1988, Method to share copy on write segment for mapped files; Keith E. Duvall, et al., 395/700; 364/DIG.1 [IMAGE AVAILABLE]

50. 4,742,447, May 3, 1988, Method to control I/O accesses in a multi-tasking virtual memory virtual machine type data processing system; Keith E. Duvall, et al., 395/375; 364/DIG.1; 395/400, 425 [IMAGE AVAILABLE]

51. 4,649,479, Mar. 10, 1987, Device driver and adapter binding technique; Hira Advani, et al., 395/700; 364/228.2, DIG.1 [IMAGE AVAILABLE]

52. 4,625,081, Nov. 25, 1986, Automated telephone voice service system; Lawrence A. Lotito, et al., 379/88, 196, 211; 902/2, 39 [IMAGE AVAILABLE]

53. 4,519,032, May 21, 1985, Memory management arrangement for microprocessor systems; Harry B. Mendell, 395/425; 364/231.4, 231.6, 232.8, 232.9, 236.2, 238.3, 238.4, 240.1, 241.2, 243, 244, 244.6, 246, 246.3, 246.6, 248.1, 252, 259, 259.2, 260.4, 260.8, 280, 280.6, 280.9, 286.4, 286.5, DIG.1; 395/725 [IMAGE AVAILABLE]

=> d kwic 2 5 6 7 10 14 18 27 29 41

2 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE  
YOU HAVE RECEIVED THIS ERROR MESSAGE 2 CONSECUTIVE TIMES

The answer numbers requested are not in the answer set.

IF YOU REQUIRE FURTHER HELP, PLEASE CONTACT YOUR LOCAL HELP DESK

ENTER ANSWER NUMBER OR RANGE (1):end

=> d l3 kwic 2 5 6 7 10 14 18 27 29 41

US PAT NO: 5,390,329 [IMAGE AVAILABLE]

L3: 2 of 53

SUMMARY:

BSUM(7)

The **kernel** must save the register portion of the context of a process whenever a process is switched out of execution, and. . . shared. These cycles impact system performance because register context switches are done each time the system receives an interrupt, the **kernel** does a process switch, or when a user makes a **system call**. To switch one process out and another process in requires the current process's register context to be saved, and the. . . since user processes require all that context to do work. However, a significant number of processes do only system or **kernel** 16:00:08 COPY AND CLEAR PAGE, PLEASE

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US PAT NO: 5,390,329 [IMAGE AVAILABLE] L3: 2 of 53

BSUM(7)

work. These **kernel** processes carry some amounts of unnecessary context, and therefore take longer to create and to switch than they actually need to take. There is a need in the prior art to develop a method by which **kernel** functions are performed more efficiently and consume only the processor resources absolutely required.

SUMMARY:

BSUM(12)

The performance of **kernel** functions such as interrupt handling in prior art systems has several basic problems. A major problem is the amount of system overhead required to perform **kernel** functions. Context switches and process start-up times consume processor cycles and affect the overall performance of the processor. Efficiency is. . . only one kind of process entity can be created or processed by only one kind of creating entity, the fork **system call**. As a result, the **kernel** processes contain more context information than is actually required. The user-side context of **kernel** processes (i.e., user block and various process table fields) is ignored by the system and is not used. However, even. . .

SUMMARY:

BSUM(17)

A . . . invention introduces a new type of process called an iproc. An iproc is a minimal-context process designed to efficiently execute **kernel** tasks. Iprocs provide an efficient means of doing work created by an interrupt or other system event into a processor. . . prior to the event. The newproc procedure is called to create a minimal-context iproc in the same way the fork **system call** is called to create a full-context process. An advantage of the present invention is that because an iproc carries only. . .

US PAT NO: 5,379,432 [IMAGE AVAILABLE] L3: 5 of 53

DETD(58)

DETD(58)

Because the **kernel** guarantees both that port rights cannot be counterfeited and that messages cannot be misdirected or falsified, port rights provide a. . . threads, memory objects, external memory managers, permissions to do system-privileged operations, processor allocations, and so on. In addition, since the **kernel** can send and receive messages itself (it represents itself as a "special" task), the majority of the **kernel** services are accessed via IPC messages instead of **system-call** traps. This has allowed services to be migrated out of the **kernel** fairly easily where appropriate.

DETD(217)

DETD(217)

control port for the thread the class  
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P0010

US PAT NO: 5,379,432 [IMAGE AVAILABLE]

L3: 5 of 53

DETD(217)

represents.

TKernelException is the C++ exception class that is thrown when a **kernel** routine gets an error.

THROW, TRY, CATCH, and ENDTRY are part of the C++ language that allow you to. . . control port for the task the class represents.

TKernelException is the C++ exception class that is thrown when a **kernel** routine gets an error.

THROW, TRY, CATCH, and ENDTRY are part of the C+ + language that allow you. . .

includes a

decomposition statement which causes the GetKernelVersion( ) method to be executed.

```
void example4(THostHandle& aHost)
```

```
{
```

```
kernel.sub.-- version.sub.-- t version;
```

```
aHost.GetKernelVersion (&version); //get version of kernel currently running
```

```
// . . .
```

```
}
```

CODE EXAMPLE 7

```
void THostHandle::GetKernelVersion (kernel.sub.-- version.sub.-- t& the Version)
```

```
{
```

```
void host.sub.-- kernel.sub.-- version(fHostPort, the Version);
```

```
}
```

CODE EXAMPLE 8

Where:

fHostPort is an instance variable of the THostHandleclass that contains. . . a port. The GetMakeSendCount( ) method includes a statement to call

mach.sub.-- port.sub.-- get.sub.-- attributes, which is a Mach

procedurally-oriented **system call** that

returns status information about a port. In GetMakeSendCount( ), fTheTask is an

instance variable of the TPortReceiveRightHandle object that. . .

US PAT NO: 5,367,680 [IMAGE AVAILABLE]

L3: 6 of 53

DETDDESC:

DETD(14)

FIG. 3 is a flow chart illustrating the rendering context manager **system call** 32. In step 700, the rendering context manager saves the user mode environment (such as saving the general purpose registers and the stack) and then establishes the **kernel** environment (such as providing the a **kernel** mode stack). The **system call** will include parameters that define the device to which the **system call** is directed, the function to be executed, and any parameters necessary for that function. After the execution of these functions,. . .

US PAT NO: 5,361,359 [IMAGE AVAILABLE]

L3: 7 of 53

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US PAT NO: 5,361,359 [IMAGE AVAILABLE] L3: 7 of 53

DETDDESC:

DETD(54)

The protection scheme is further illustrated by FIG. 6, which shows a block diagram of the relationship between the **kernel** 216, the application programs 514, and the PM 118hi. The HI system 100 forces every memory access request (shown as. . . from any of the application programs 5 14 to enter the OS protection state 512 at one of the well-defined **kernel** entry points 612. In other words, memory access requests must be made with a **system call** to the **kernel** 216. This restriction enables the **kernel** 216 to examine the request and refuse it if it would involve inappropriate writing to the PM 118hi.

DETDDESC:

DETD(56)

First, . . . finding a "hole" in the memory protection scheme of the operating system 215. An example of a hole is a **system call** that, when provided with faulty arguments, writes unintended values into the address space of the **kernel** 216. In the HI system 100, the **kernel** 216 is analyzed and tested to reduce the risk of this kind of attack. Because the application programs 514 and. . .

DETDDESC:

DETD(59)

Protection . . . system depends on user-level processes (such as the init and pager processes in Unix). For example, in Unix, the ptrace **system call** enables one process to modify another. Therefore, if Unix were the underlying operating system, the ptrace facility would have to be modified to prevent its use on executing programs (including the **kernel** 216) which are stored on the PM 118hi. Additionally, any ROM monitor program that enables the ordinary user 128 to. . .

US PAT NO: 5,327,553 [IMAGE AVAILABLE] L3: 10 of 53

DETDDESC:

DETD(96)

When a user issues a **system call**, /config will either satisfy that request or pass the request on the associated **kernel** module. Each node has a list of procedures (cf.sub.-- procs) corresponding to the supported operations: open, close, read, write, attr,. . . contain any value, but will typically store an address or unit number to aid in identifying the target of the **system call**. The value must be unique.

US PAT NO: 5,291,608 [IMAGE AVAILABLE] L3: 14 of 53

DETDDESC:

DETD(14)

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P0012

US PAT NO: 5,291,608 [IMAGE AVAILABLE]

L3: 14 of 53

DETD(14)

FIG. 3 is a flow chart illustrating the rendering context manager **system call** 32. In step 700, the rendering context manager saves the user mode environment (such as saving the general purpose registers and the stack) and then establishes the **kernel** environment (such as providing the a **kernel** mode stack). The **system call** will include parameters that define the device to which the **system call** is directed, the function to be executed, and any parameters necessary for that function. After the execution of these functions, . . .

US PAT NO: 5,202,971 [IMAGE AVAILABLE]

L3: 18 of 53

SUMMARY:

BSUM(28)

In the standalone system, the **kernel** buffer 12 is identified by blocks 15 which are designated as device number and logical block number within the device. When a read **system call** 16 is issued, it is issued with a file descriptor of the file 5 and a byte range within the. . .

DETDDESC:

DETD(93)

Files, . . . advisory locking mode. The locking mode of a file is controlled by changing the file's permission codes with the **chmod system call**. Locks on a file in enforced locking mode are called enforced locks; locks on a file in advisory mode are. . . that they are accessing. The advantage of advisory locks is that they do not have to be interrogated by the **kernel** during ordinary reading or writing operations. Enforced locks will probably be used less often. An enforced lock, like an advisory. . .

US PAT NO: 5,115,505 [IMAGE AVAILABLE]

L3: 27 of 53

DETDDESC:

DETD(2)

FIG. . . . assignment, allocation of resources and dynamic load balancing is performed by process manager (PM) function 108 being executed by the **kernel** of computer 101. The latter computer is designated as the host computer of the system, FIG. 1. The execution of an **exec system call** by any computer of FIG. 1 results in PM function 108 being executed by the **kernel** of computer 101. The latter function's use of flags, variables, and parameters that are specified by the system administrator, application. . .

DETDDESC:

DETD(6)

The . . . dynamic loading function at the time the source code of the requesting program is written. Upon execution of the **sysmulti system call**, the parameters defining the application programmer's adjustments are initially stored in the ublock of the process in a standard manner. These parameters are then passed to the **kernel** of computer 101 for use with PM  
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US PAT NO: 5,115,505 [IMAGE AVAILABLE] L3: 27 of 53

DETD(6)  
function 108 during the execution of the exec **system call**.

DETDDESC:

DETD(10)

Block 204 allows the application program to execute a **sysmulti system call** before executing the exec **system call**. If the **sysmulti system call** has been executed, block 205 is executed, and the parameters specified in the **sysmulti system call** are stored in the ublock of the executing child process by block 205. Block 206 is executed by the exec **system call** which reads the parameters that have been specified and transmits these along with other information to the **kernel** of computer for use with PM process 108.

DETDDESC:

DETD(12)

During the execution of the exec **system call**, the latter **system call** reads the parameters from the ublock and/or from the a.out file and transfers these parameters to PM process 108. In order to make the processor assignment, the **kernel** of computer 101 calls the assignpe procedure in PM function 108. The flags and parameters that have been determined by. . .

US PAT NO: 5,109,515 [IMAGE AVAILABLE] L3: 29 of 53

DETDDESC:

DETD(14)

Patch . . . Patch 21 also causes operating system 20 to map the memory space occupied by patch 21 into operating system 20 **kernel** space, by means of the "Terminate-stay resident" **system call**, at step 299. This ensures that patch 21 process remains resident in memory 210 and its space is not reclaimed. . .

DETDDESC:

DETD(102)

An . . . is a bit field specifying the reason why request server 32 was awakened (i.e., an open, close, read, or write **system call** having been made on a port 501). The return code specifies the number of entries in the structure. In response. . . If no new port 501 activity is indicated at step 1303, the IOCTL routine calls the sleep function of the **kernel** operating system 30 to put the context associated with request server 32--including the sleep routine--to sleep, at step 1306, and. . .

US PAT NO: 4,901,231 [IMAGE AVAILABLE] L3: 41 of 53

DETDDESC:

DETD(5)

The . . . processes are added to the extended process as other resources  
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P0014

US PAT NO: 4,901,231 [IMAGE AVAILABLE]

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DETD(5)

are required in different processors of the multiprocessor system. The **kernel** of the processor executing the user process of the extended process automatically detects the need to create a stub process when a **system call** is made by the user process requiring resources on a new processor. The user process's **kernel** then communicates with the kernel of the new processor to establish a stub process on the new processor. The establishment of. . .

DETDDESC:

DETD(7)

Upon olduser process 109 executing the exec **system call**, the **kernel** of computer 102 transmits a packet to computer 103 to obtain the header portion of the a.out file via a.out. . . 108 being executed by computer 101 which is designated as the host computer of the system of FIG. 1. The **kernel** of computer 102 then transmits a packet to process manager function 108 of computer 101 requesting allocation of resources for. . . the operations of process manager function 108 is illustrated in the copending application of Bishop et al., Ser. No.941,701. The **kernel** of computer 102 then transmits process control information to the **kernel** of computer 104 so that the latter **kernel** can setup newuser process 111 and stub processes in computers 102, 105, and 106 for the future execution of the. . .

DETDDESC:

DETD(8)

Once this initialization has been performed, the **kernel** of computer 102 passes the execution of the exec **system call** to the **kernel** of computer 104. The latter **kernel** obtains the a.out file from computer 103. The **kernel** of computer 104 also transmits messages to the kernels of the other computers informing them that the user process which was. . . kernels of the other computers will now direct any signals for olduser process 109 to newuser process 111. Further, the **kernel** of computer 104 transmits a message to the **kernel** of computer 102 to recover all signals transmitted to olduser process 109 that arrived at computer 102 before the other. . .

DETDDESC:

DETD(9)

FIG. 2 illustrates in greater detail the execution of the exec **system call** and creation of the extended process for the present example. Upon execution of the exec **system call** by olduser process 109, decision block 202 is performed. The exec **system call** may specify parameters for influencing the processor assignment. Decision block 202 determines whether or not the file containing the a.out. . . extended process, a packet is sent to create a stub process on computer 103. In response to the packet, the **kernel** of computer 103 creates a.out process 110 that allows access to the a.out file. The a.out process 110 then becomes part. . . information is read from the a.out file and is stored in the process control block of a.out process 110. The **kernel** of computer 103 then transmits a subset of the header to computer 102's kernel which stores the subset in the process control. . . file and may specify parameters for influencing the processor assignment decision. After obtaining the information from the a.out file, the

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P0015

US PAT NO: 4,901,231 [IMAGE AVAILABLE]

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DETD(9)

**kernel** of computer 102 transmits a packet to the **kernel** of computer 101 requesting that the **kernel** execute process manager function 108 to select a computer upon which newuser process 111 is to assigned at block 208. . . . contains the information obtained from the a.out file in block 206 and any parameters regarding processor assignment in the exec **system call**. PM function 108 is responsive to this packet to validate an explicit assignment if one existed in the a.out or exec **system call** information or to perform a dynamic load balancing for the multiprocessor system illustrated in FIG. 1 in order to make. . . .

DETD(9):

DETD(10)

Next, the **kernel** of computer 102 executes block 210. The execution of block 210 results in the arguments of the exec **system call** being read. The **kernel** of computer 102 is responsive to these arguments and any environment variables from the olduser process 109's. . . .

DETD(10):

DETD(11)

The actions just performed represent a preexecution stage of the exec **system call**. If the newuser process is present on a different computer than the olduser process, then blocks 220 through 238 are executed before blocks 240 through 250. In the present example, the **kernel** of computer 102 executes blocks 220 through 228, and the **kernel** of computer 104 executes blocks 230 through 238. However, if the olduser and the newuser processes are on the same. . . . and newuser process 111 is on computer 104, the **kernel** of computer 102 executes block 220 which results in a packet being transmitted over to the **kernel** of computer 104. This packet requests that a stub process be created which will become newuser process 111 on computer 104. The **kernel** is responsive to this request to create a skeleton stub process by performing a **kernel** fork function on a prototype stub process. Each **kernel** of FIG. 1 maintains a copy of the prototype stub process for the purpose of creating stub processes. The **kernel** of computer 102 then executes block 222. The latter block results in the transmission of a migration packet from computer. . . .

DETD(11):

DETD(18)

The . . . determined by the application programmer. The programmer marks the files to be closed in a standard UNIX manner using the **fcntl system call** prior to execution of the exec **system call**. This information is stored in the process control block of olduser process 109 and is later transferred to newuser process 111. After closing all of the marked files, the **kernel** of computer 104 executes block 246 so as to reinitialize the array of signal-handler fields which contain an entry defining. . . . value but any entry that contains an ignore value is not modified. When a signal is received for a process, the **kernel** accesses the process control block for that process and stores the signal in the sig entry, such as entry 423 as 16:02:53 COPY AND CLEAR PAGE, PLEASE

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P0016

US PAT NO: 4,901,231 [IMAGE AVAILABLE]

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DETD(18)

illustrated in FIG. 4. When a signal is handled by the **kernel**, the signal number is used as an index to access the signal array. If the default value is accessed, the . . . the accessed entry contains a pointer, then the function identified by the pointer is executed. When the application runs, the signal **system call** will be used to configure the array to the requirements of that program. Further information on the handling of signals can be found in the aforementioned book of Bach. Next, the **kernel** of computer 104 executes block 248 which reinitializes any memory management information required for newuser process 111's new address space. . .

DETDDESC:

DETD(19)

FIG. 3 illustrates in greater detail a portion of the extended process resulting from the execution of the exec **system call**. New process 111 is the user process of the extended process and processes 112 and 110 are stub processes of. . . maintains a proc pointer table such as 301 through 303 of FIG. 3. The pid number is utilized by the **kernel** to point into a proc pointer table such as tables 301 through 303 to obtain the pointer such as 304. . .

DETDDESC:

DETD(27)

In . . . a.out file, and entry 432 points to the new a.out file which is executed as a result of the exec **system call**. If both files are local to the processor executing the user process of the extended process, then these entries are pointers which point into the inode table maintained by the **kernel** of the local processor in a standard UNIX system manner to identify the local files. The system file table is not used since the a.out files are not used by the process directly but rather by the **kernel**. However, if the file is remote, e.g. associated with another processor, the entry contains an identification of an entry in the user. . .

DETDDESC:

DETD(28)

In . . . stub process, the information concerning the path name is received from the user process and is then stored by the **kernel** at a convenient location. At this point and time, the **kernel** sets the dirp entry to point to the path name. An example of when the path name is transmitted is during an open **system call**. Since the open **system call** is executed on the processor executing the user process of the extended process, the path name information is not available. . .

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A horizontal number line with a dashed line at the top and bottom. The line is labeled '0' at the left end and '1' at the right end. A point labeled 'Ü' is marked on the line, positioned approximately three-quarters of the way from 0 to 1.

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| Num | Search | Hits |
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|-----|--------|------|

```

◦ #1      system call                                     21  ◦

```

```

◦ #2      kernel                                     764  ◦

```

◦ #3      kernel w/30 #1      2   ◦

° #4      kernel and #1      2   °

âä Press TAB to access previous results áääáääáääáääáääáääáääáääáääáääáääáääáääáääáääí

Type your search and press ENTER.

Press F5 for Periodical Directory.



```
1 273 Records with Word/Phrase Index of KERNEL
2 92 Records remaining, Limiting to those with Word/Phrase Index of SYSTEM
```

F1-Help    --Move    áì-Select    F2-Usage    F6-Databases    F8-PrtHist    F3-Restart

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